



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,103	02/03/2006	Magdalena Lewicka-Schafer	126918	3017

25944 7590 04/10/2007  
OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER
----------

COHEN, AMY R

ART UNIT	PAPER NUMBER
----------	--------------

2859

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/567,103

Applicant(s)

LEWICKA-SCHAFER,  
MAGDALENA

Examiner

Amy R. Cohen

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/03/2006</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 2, 7-9, 12 are objected to because of the following informalities:

Claim 2, line 1 “wherein the material” is confusing since it is unclear if the material is the self-lubricating material or the low friction material claimed in claim 1.

Claim 7 claim language is confusing because it is unclear if the polytetrafluoroethylene impregnated in a matrix is one of the self-lubricating or low friction materials claimed in claim 1 or another additional material.

Claim 8 claim language is confusing because it is unclear if the solid lubricant film is one of the self-lubricating or low friction materials claimed in claim 1 or another additional material.

Claim 9, the terms “or film” lack antecedent basis in the claim language.

Claim 12 claim language appears to be repetitive regarding the subject matter claimed in claim 11.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Jones (GB 2,243,688A).

Art Unit: 2859

Jones teaches a stylus tip for a workpiece contacting probe, comprising a self-lubricating or low friction material (Page 2, Paragraphs 1, 2).

4. Claims 1, 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by McMurtry et al. (EP 1,079,201 A2).

McMurtry et al. teaches a stylus tip for a workpiece contacting probe, comprising a self-lubricating or low friction material (Paragraphs [0001], [0002], [0010]-[0012]).

McMurtry et al. teaches the stylus tip comprising a substrate (20) and a coating (22) over said substrate, the coating comprising said self-lubricating or low friction material (Paragraphs [0010]-[0012]).

McMurtry et al. teaches a stylus for a workpiece contacting probe having a stylus tip according to the above (Paragraphs [0001], [0002], [0010]).

McMurtry et al. teaches a workpiece contacting probe having a stylus according to the above (Paragraphs [0001], [0002], [0010]).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3, 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Reeber et al. (U. S. Patent No. 5,075,130).

Jones discloses the stylus tip as described above in paragraph 3.

Jones does not disclose the stylus tip wherein the material is a composite comprising a low friction material or solid state lubricant, incorporated into a dimensionally stable microstructure; wherein the solid state lubricant is graphite or graphite-like; comprising boron carbide annealed to produce a solid lubricant film on its surface; wherein the self-lubricating material or film is self-replenishing.

Reeber et al. discloses a material wherein the material is a composite comprising a low friction material or solid state lubricant, incorporated into a dimensionally stable microstructure (Col 4, lines 8-39); wherein the solid state lubricant is graphite or graphite-like (Col 3, lines 6-16); comprising boron carbide annealed to produce a solid lubricant film on its surface (Col 4, lines 10-39, Col 5, lines 7-32); wherein the self-lubricating material or film is self-replenishing (Col 5, lines 25-41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the material of the stylus tip of Jones be boron carbide annealed to produce a solid lubricant film on its surface, as taught by Reeber et al., since Reeber et al. teaches that the boron carbide annealed to produce a solid lubricant film on its surface creates a material with further reduced friction, chipping and wear, and greater durability and life-span, thereby increasing accuracy of a device over a duration of time.

7. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Sutaria et al. (U. S. Patent No. 6,740,286).

Jones discloses the stylus tip as described above in paragraph 3.

Jones does not disclose the stylus tip wherein the material is a composite comprising a low friction material or solid state lubricant, incorporated into a dimensionally stable

microstructure; wherein the solid state lubricant is graphite or graphite-like; wherein the solid state lubricant is hexagonal boron nitride; wherein the dimensionally stable microstructure comprises silicon nitride; wherein the ration of boron nitride to silicon nitride is less than 20%, preferably 5%-15%.

Sutaria et al. discloses a material wherein the material is a composite comprising a low friction material or solid state lubricant, incorporated into a dimensionally stable microstructure (Col 2, lines 5-22, Col 3, lines 31-40, Col 6, lines 57-67); wherein the solid state lubricant is graphite or graphite-like (Col 4, lines 2-8); wherein the solid state lubricant is hexagonal boron nitride (Col 4, lines 2-8, lines 52-64); wherein the dimensionally stable microstructure comprises silicon nitride (Col 4, lines 52-64); wherein the ration of boron nitride to silicon nitride is less than 20%, preferably 5%-15% (Col 7, lines 13-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the stylus tip of Jones be of a hexagonal boron nitride and silicon nitride composite, as taught by Sutaria et al., since Sutaria et al. teaches that this composition is both durably and wear resistant and can be made in a cost effective manner which will reduce overall costs of manufacturing (Sutaria et al., Col 2, lines 5-13, lines 40-59, Col 3, lines 41-55).

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Pfaff (U. S. Patent No. 5,707,567).

Jones discloses the stylus tip as described above in paragraph 3.

Jones does not disclose the stylus tip comprising polytetrafluoroethylene is impregnated in a matrix material.

Pfaff discloses a material wherein polytetrafluoroethylene is impregnated in a matrix material (Abstract, Col 2, lines 28-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to impregnate the material of the stylus tip of Jones with polytetrafluoroethylene, as taught by Pfaff in order to have a material which is self-lubricating (Pfaff, Col 6, lines 55-64), thereby reducing the friction and increasing the life of the stylus tip.

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following teach materials and/or stylus tips Yamamoto et al. (U. S. Patent No. 6,746,157), Osterstock (U. S. Patent No. 6,609,308), Miyamori et al. (U. S. Patent No. 5,684,088), Pfaff (U. S. Patent No. 5,580,834), and Miller et al. (U. S. Patent No. 5,083,884).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy R. Cohen whose telephone number is (571) 272-2238. The examiner can normally be reached on 8 am - 5 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2859

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ARC  
March 30, 2007



**Diego Gutierrez**  
Supervisory Patent Examiner  
Technology Center 2800